

TRANSCRIPTION - ORIGINAL FOLLOWS

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D.C.

ADVANCED DEVELOPMENT OBJECTIVE FOR AN ANTI-SATELLITE PROGRAM

OBJECTIVE: To demonstrate the technical feasibility of developing a non-orbital, collision course satellite interceptor system capable of destroying hostile satellites in an early time period.

CONCEPT: Non-orbiting interceptors employing collision course attacks offer the possibility of providing an early means of destroying known hostile satellites. Launched directly from the ground or possibly from carrier aircraft such interceptors would be employed after satellites have been designated as hostile. This designation would be made by the aerospace defense system which is expected to include surveillance and prediction (i.e., SPADATS-IMP) and identification (e.g., Advanced System 621A) capabilities. In addition, the non-orbiting approach ultimately may offer a means for attrition of large numbers of satellites and a capability for covert kills.

CHARACTERISTICS: The satellite interceptor system should have the general characteristics shown in the following paragraphs. Parametric analyses and trade-off considerations including costing are required to select the components to be employed in the system and to define the characteristics in greater detail.

A. Intercept satellites to the maximum useful altitude of the surveillance system.

B. Provide the ability to intercept all satellites operating below the inner Van Allen belt from a reasonable minimum number of interceptor launching sites.

C. Be capable of intercepting a satellite target as soon after it has been declared hostile as is economically and operationally reasonable.

D. Employ boosters using either solid propellants or storable liquids. Prime consideration should be given to using boosters that are under development or in production, keeping to the minimum any special support system requirements.

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FOR AN

ANTI-SATELLITE PROGRAM

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E. Be capable of employing [words excised] warhead. If necessary, alternative guidance and control systems can be chosen to match alternative warheads. The prime criteria to be considered in the selections should be system effectiveness and simplicity of the overall system (and hence reliability). Consideration must be given to economic supportability and maintainability of an operational system. In addition, consideration must be given to means of attaining positive kill assessment either by the interceptor itself or by means of the surveillance, tracking, and identification system.

F. Place primary emphasis on the attainment of an early capability in a cold war environment. In addition, the intercept system should be capable of growth into a system having the response time and survival characteristics associated with operation in a central war environment.

G. Depend upon the currently planned Satellite Detection and Tracking System (SPADATS-IMP) for basic surveillance and control environment. In addition, consideration should be given to modifications of SPADATS if such modifications could lead to significant improvements in the cost or capabilities of an anti-satellite system. It is recognized that a major revision of the environment may be required to provide a surveillance and control capability in a central war.

H. Be capable of being launched from the ground. In addition, considerations should be given to any unique advantages that might accrue from an air-launch capability.

I. Be capable of operating during peacetime without subjecting civil population and property to undue hazards from debris or weapons effects.

J. Be capable of being used in a manner which might accomplish covert kills without unduly decreasing effectiveness in the primary overt-kill mode.

ACTION REQUIRED: AFSC will investigate the choices available in the selection of components for a non-orbital, collision course satellite interceptor to be available at an early time period and prepare a development plan by 30 June [illeg]. The development plan should identify the critical areas in the development of the system and process hardware demonstrations of the solution of these critical problems in an early phase in the development of the system.

FOR THE CHIEF OF STAFF

W.B. KEESE
Major General, USAF
Director of Development Planning

4. Be capable of employing alternative guidance and control systems. If necessary, alternative guidance and control systems can be chosen to match alternative warheads. The prime candidate to be considered in the selection should be system effectiveness and simplicity of the overall system (and hence reliability). Consideration must be given to economic supportability and maintainability of an operational system. In addition, consideration must be given to means of attaining positive kill enhancement either by the interceptor itself or by means of the surveillance, tracking, and identification system.

5. Place primary emphasis on the attainment of an early capability in a cold war environment. In addition, the intercept system should be capable of growth into a system having the response time and survival characteristics associated with operation in a central war environment.

6. Depend upon the currently planned Satellite Detection and Tracking System (SPADATS-IHP) for basic surveillance and control environment. In addition, consideration should be given to modifications of SPADATS if such modifications could lead to significant improvements in the cost or capabilities of an anti-satellite system. It is recognized that a major revision of the environment may be required to provide a surveillance and control capability in a central war.

7. Be capable of being launched from the ground. In addition, consideration should be given to any unique advantages that might accrue from an air-launch capability.

8. Be capable of operating during peacetime without subjecting civil population and property to undue hazards from debris or weapons effects.

9. Be capable of being used in a manner which might accomplish covert kills without unduly decreasing effectiveness in the primary overt-kill mode.

ACTION REQUIRED: AFSS will investigate the choices available in the location of components for a non-orbital, collision course satellite interceptor to be available at an early time period and prepare a development plan by 30 June 1963. The development plan should identify the critical areas in the development of the system and promote hardware demonstrations of the solution of these critical problems in an early phase in the development of the system.

FOR THE CHIEF OF STAFF

a/s

**W. B. KERR
Major General, USAF
Director of Development Planning**